TOSTFO" 6CT28660

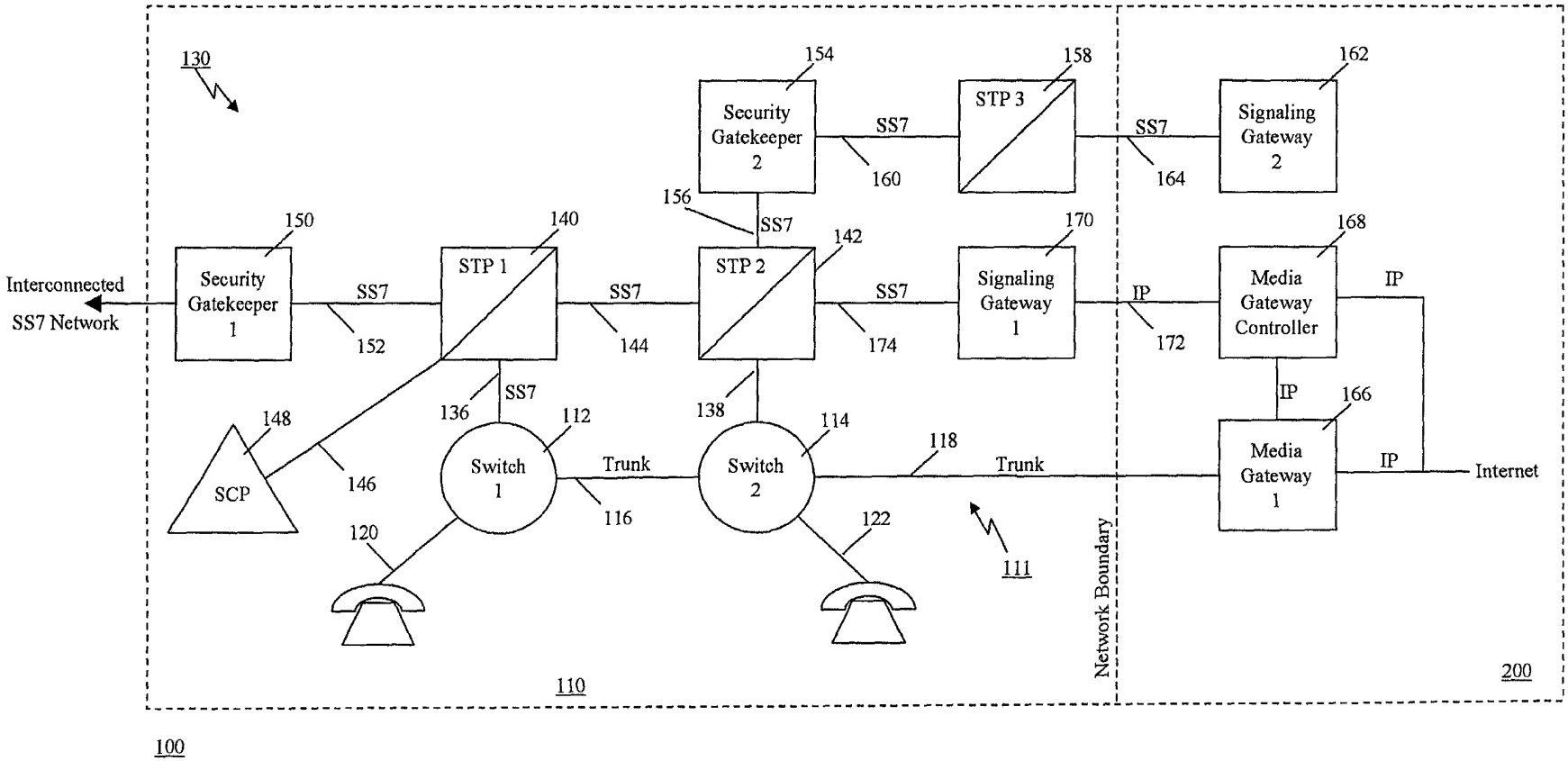


Figure 1

TOBTTO" 6/T28660

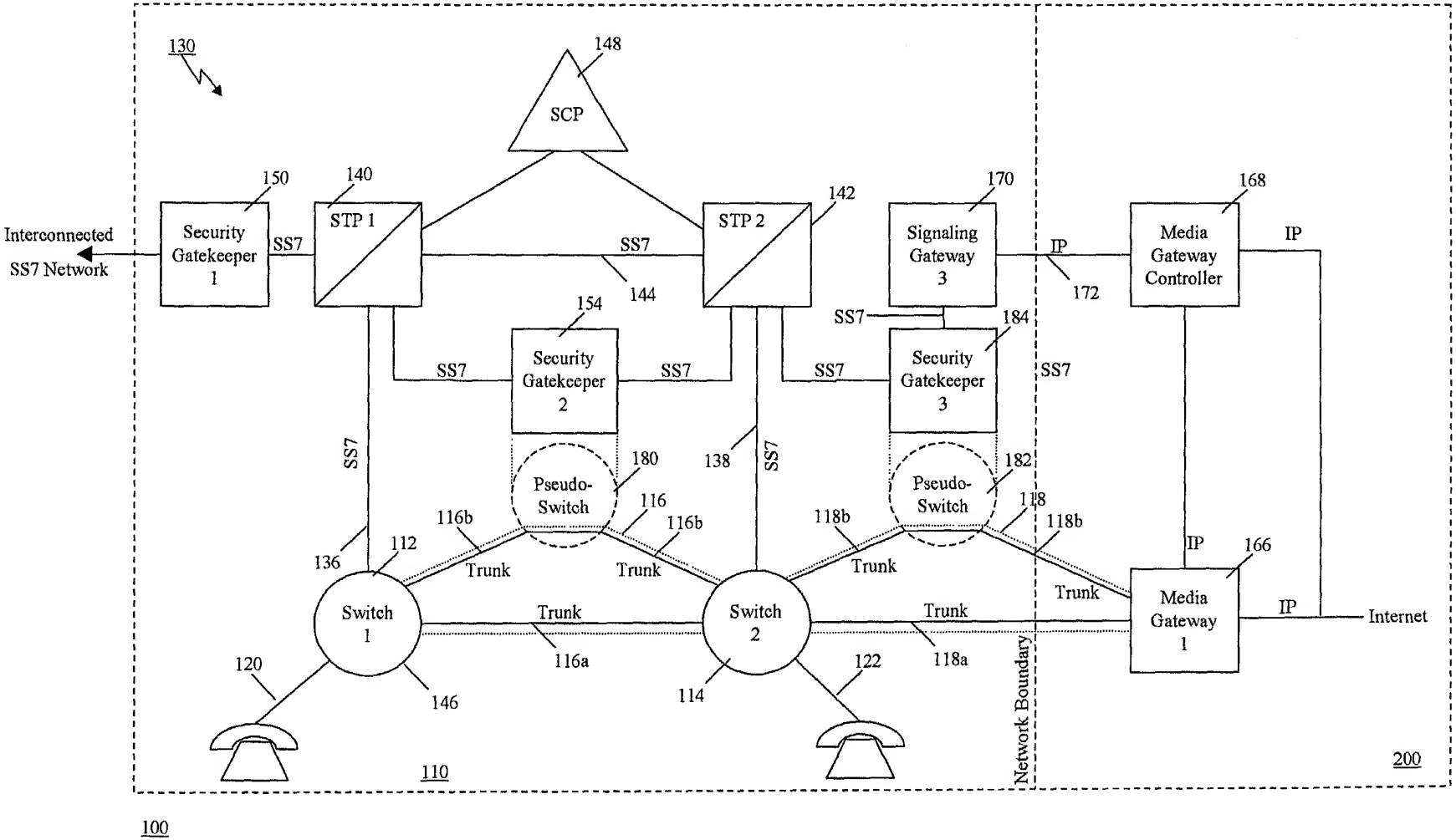


Figure 2

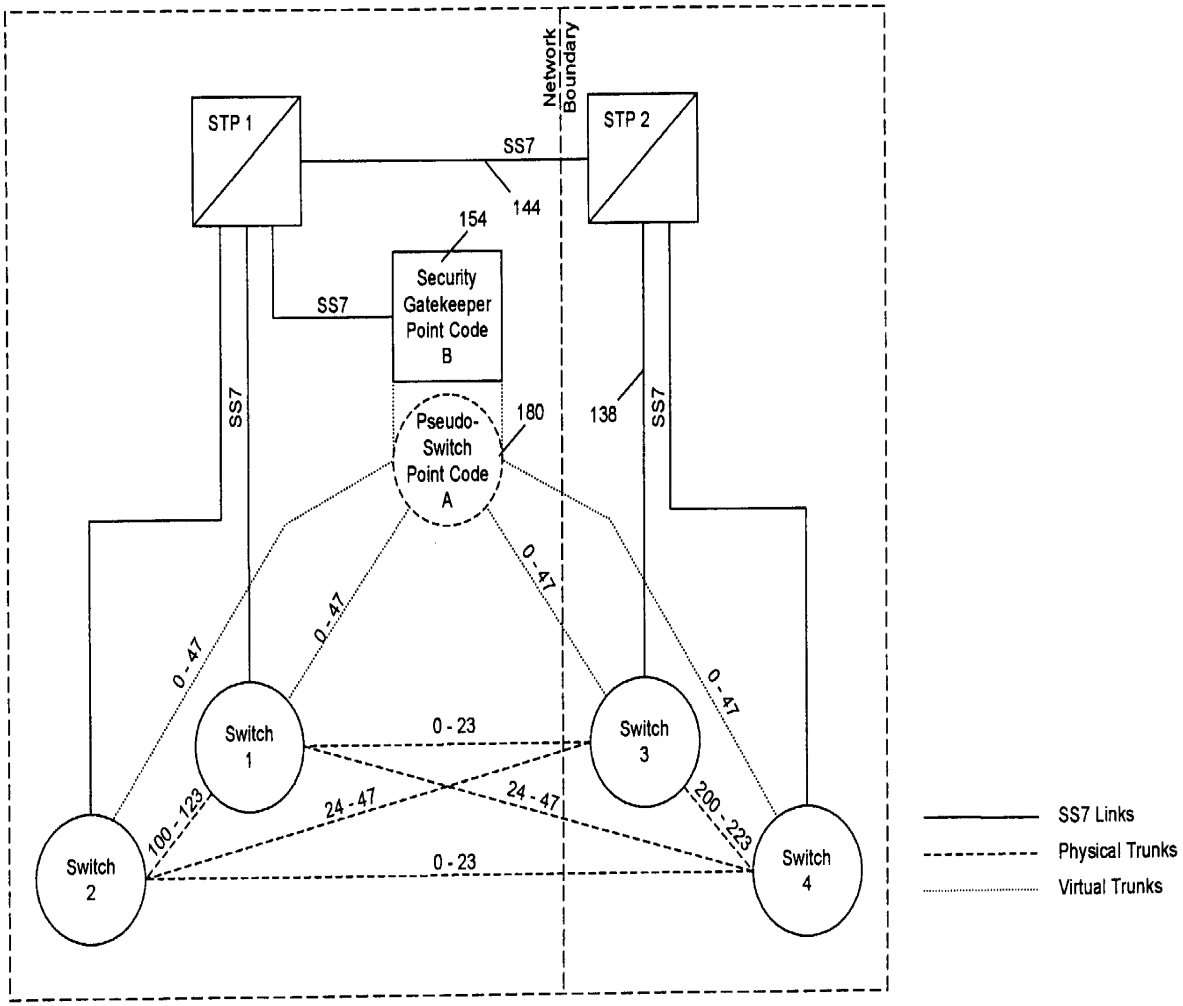

Network Boundary
STP 1
STP 2
SS7
144
154
Security Gatekeeper Point Code B
SS7
SS7
SS7
138
180
Pseudo-Switch Point Code A
0 - 47
0 - 47
0 - 47
0 - 47
Switch 1
Switch 3
0 - 23
24 - 47
24 - 47
100 - 123
200 - 223
Switch 2
Switch 4
0 - 23
SS7 Links
Physical Trunks
Virtual Trunks

Figure 3

TOSTED 6473660

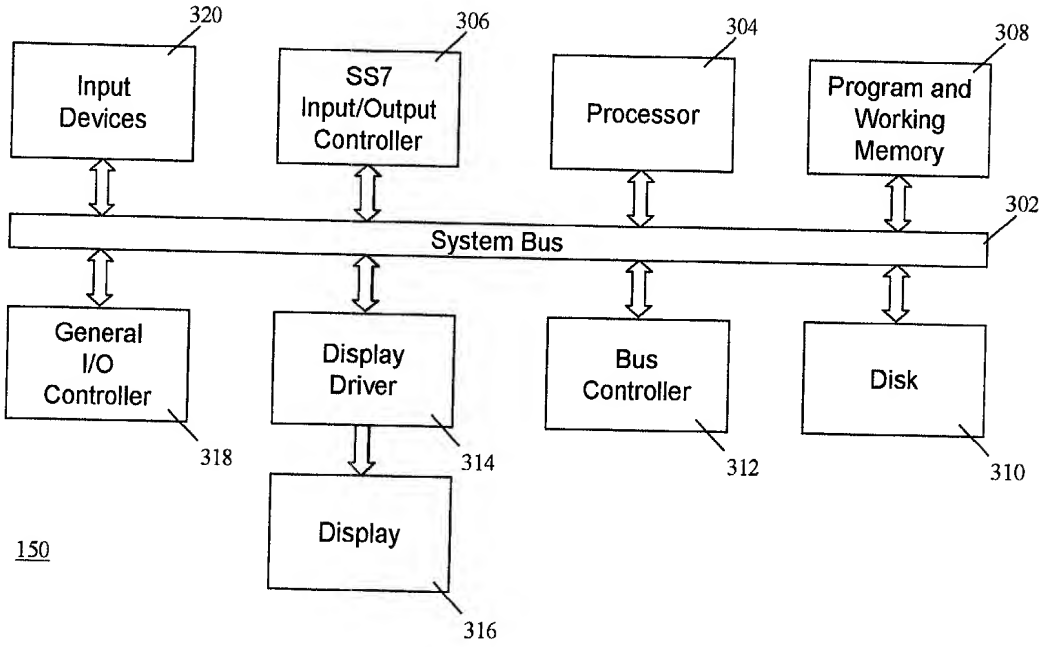
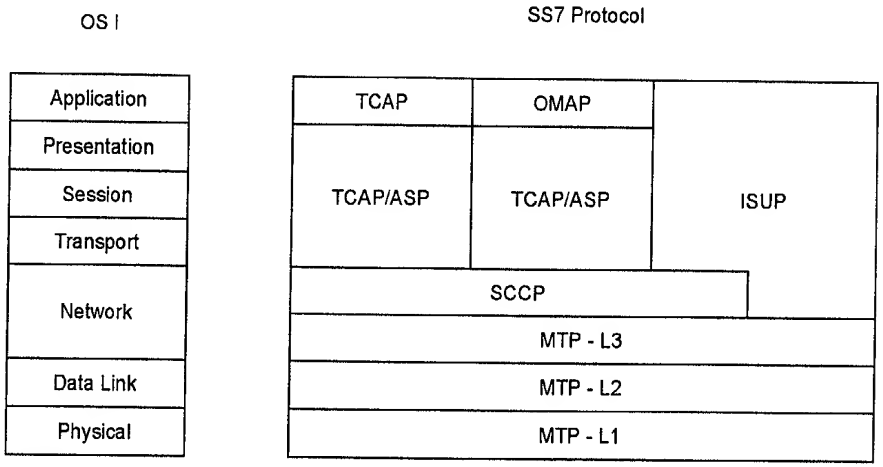


Figure 4

T08T70*6ZT28660



Legend

ASP - Application Service Part (Connection Oriented Protocols
MTP - Message Transfer Part (L1, L2 & L3)
OMAP - Operations, Maintenance, Application Part
SCCP - Signaling Connection Control Part
TCAP - Transaction Capability Application Part

Figure 5

TOBTO"6ZT38660

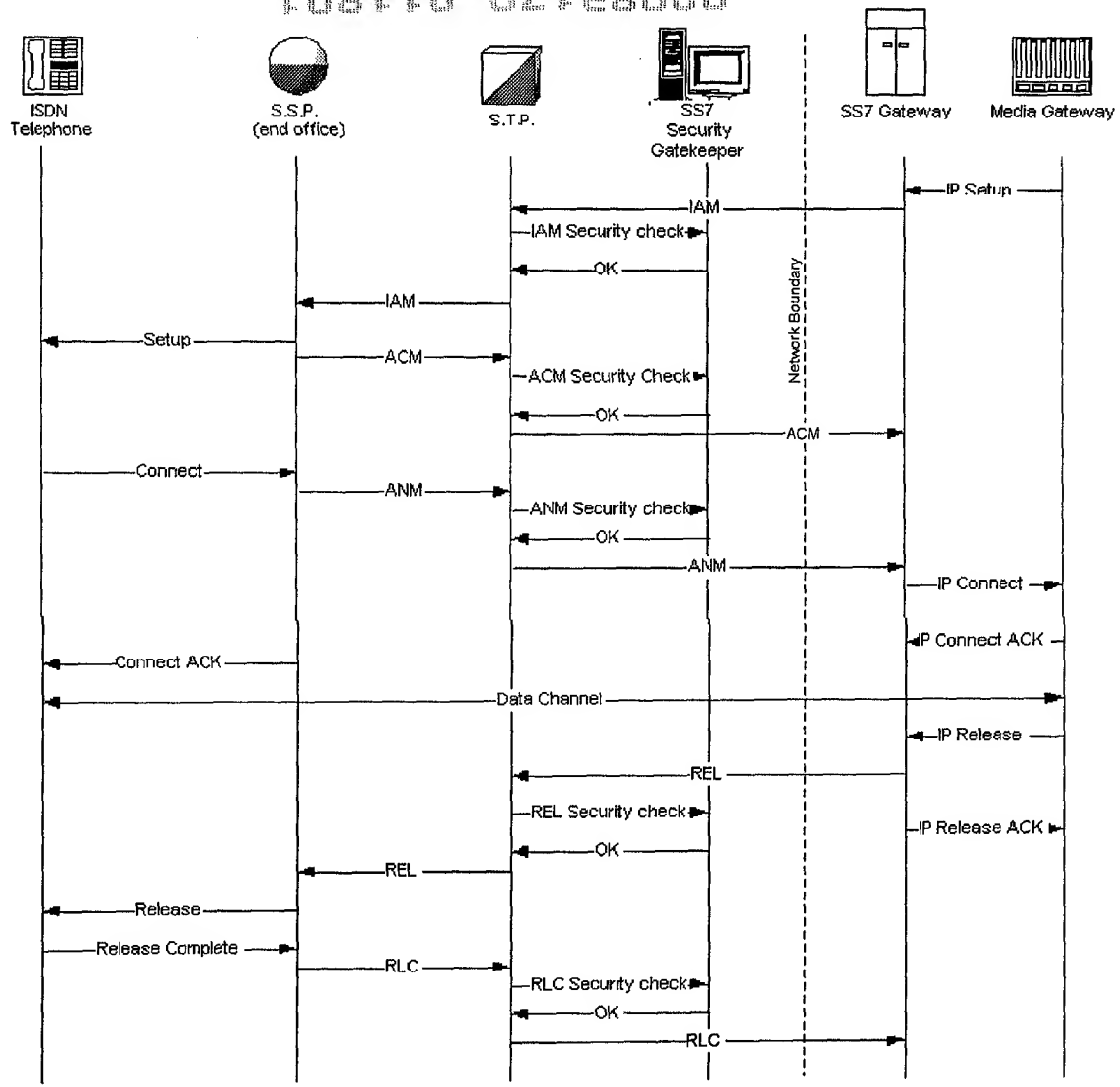


Figure 6

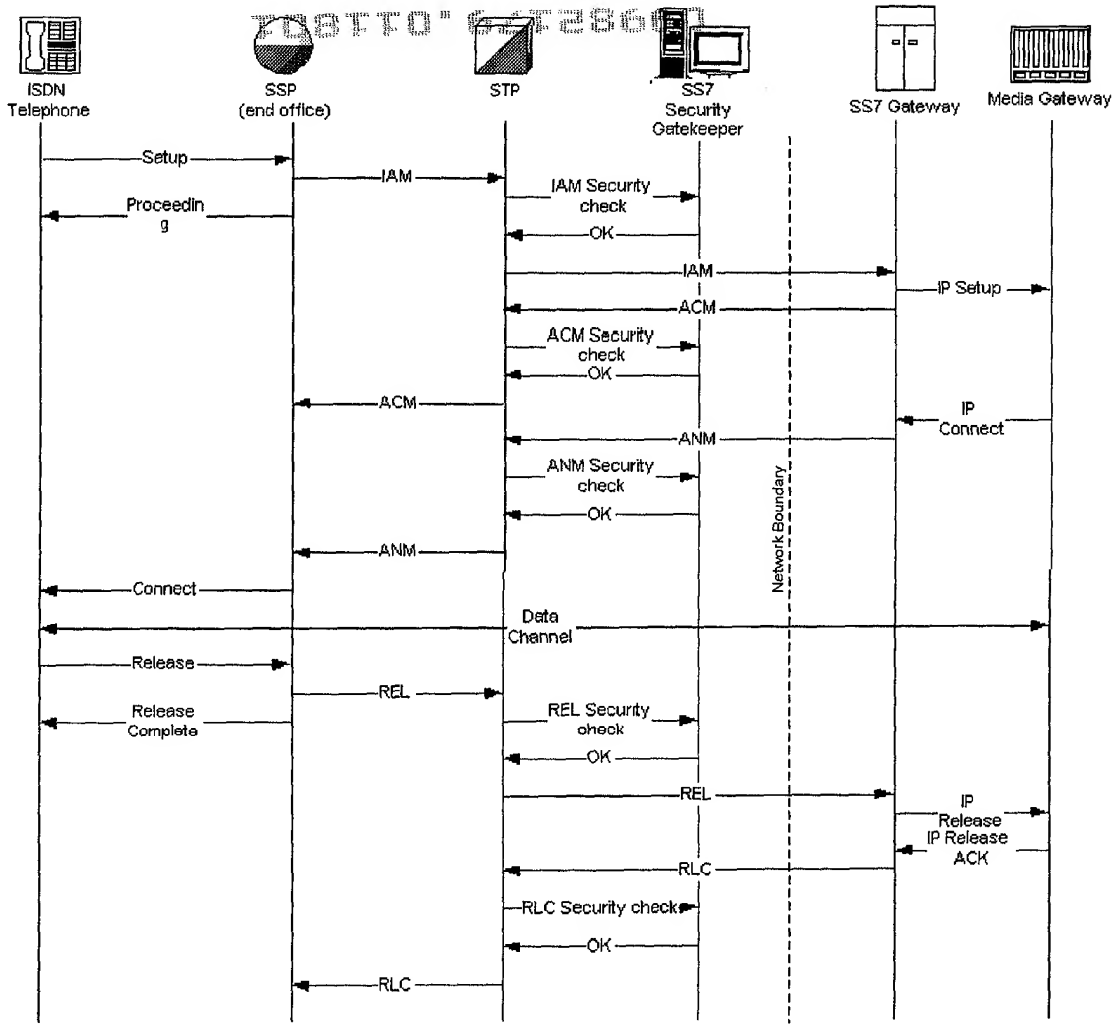

ISDN Telephone
SSP (end office)
STP
SS7 Security Gatekeeper
SS7 Gateway
Media Gateway
Setup
IAM
IAM Security check
Proceeding
OK
IAM
IP Setup
ACM
ACM Security check
OK
ACM
IP Connect
ANM
ANM Security check
OK
Network Boundary
ANM
Connect
Data Channel
Release
REL
Release Complete
REL Security check
OK
REL
IP Release
IP Release ACK
RLC
RLC Security check
OK
RLC

Figure 7

TOBTTO" 6ZT28660

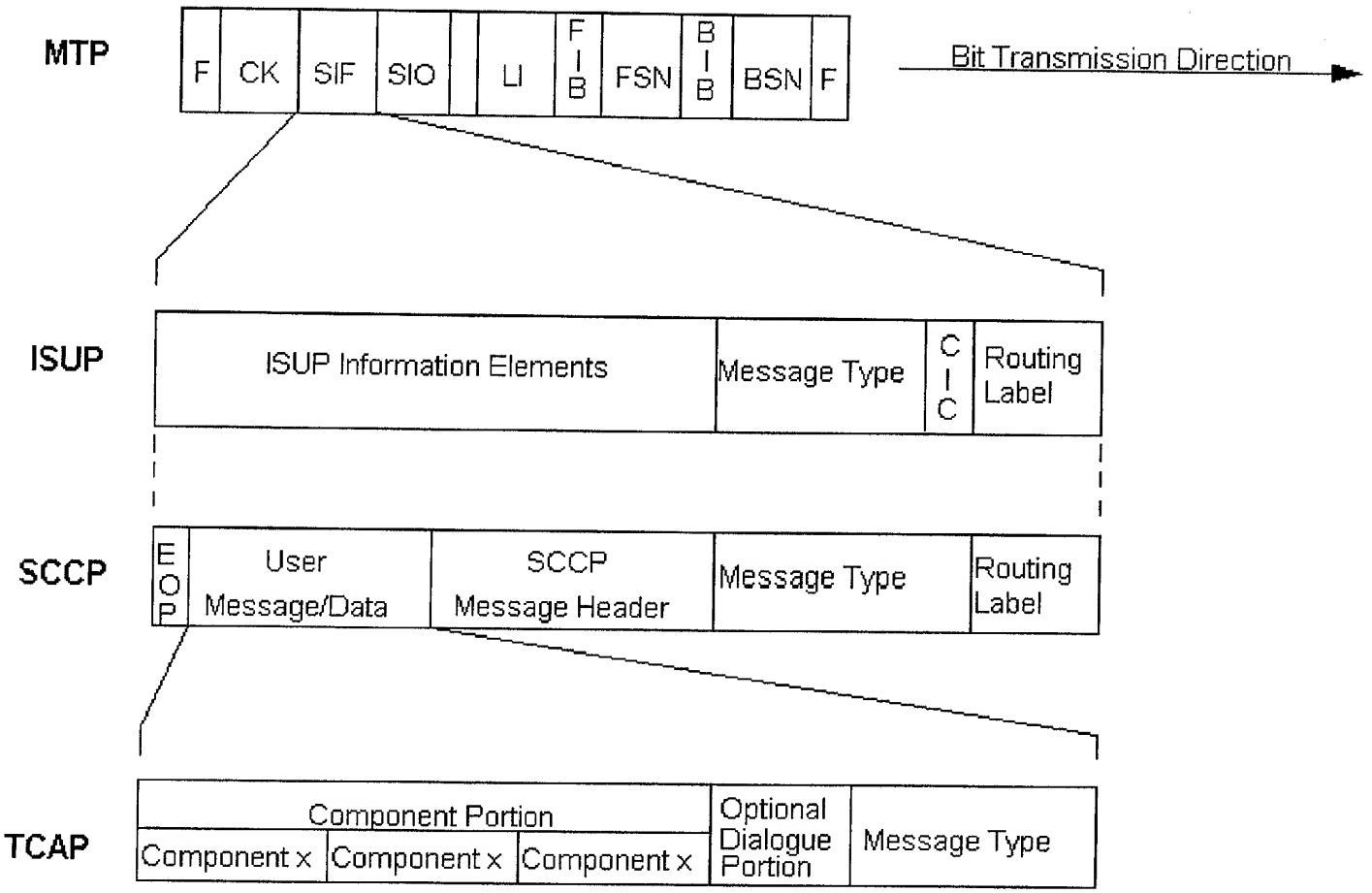


Figure 8

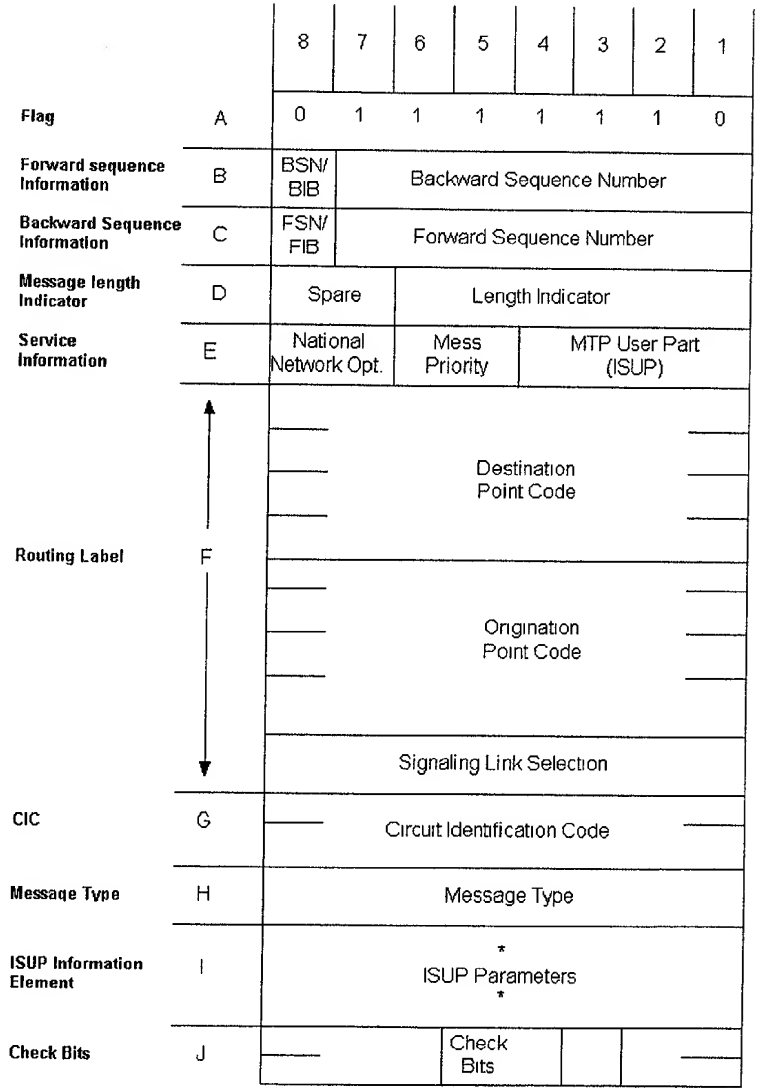

8
7
6
5
4
3
2
1
Flag
A
0 1 1 1 1 1 1 0
Forward sequence Information
B
BSN/ BIB
Backward Sequence Number
Backward Sequence Information
C
FSN/ FIB
Forward Sequence Number
Message length Indicator
D
Spare
Length Indicator
Service Information
E
National Network Opt.
Mess Priority
MTP User Part (ISUP)
Routing Label
F
Destination Point Code
Origination Point Code
Signaling Link Selection
CIC
G
Circuit Identification Code
Message Type
H
Message Type
ISUP Information Element
I
*
ISUP Parameters
*
Check Bits
J
Check Bits

Figure 9

T08T70"6ZT38660

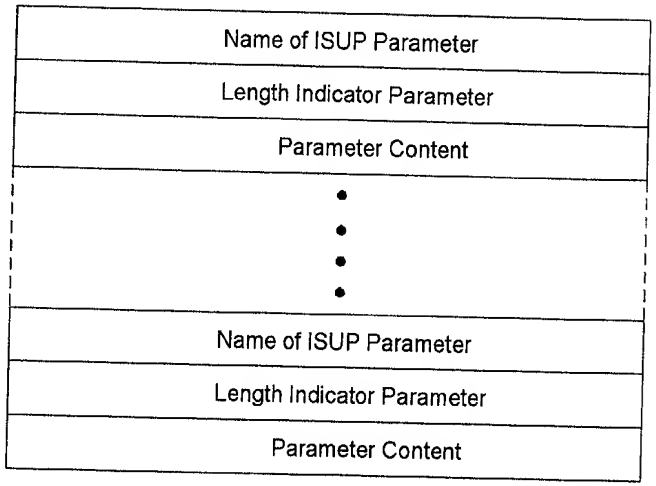


Figure 10

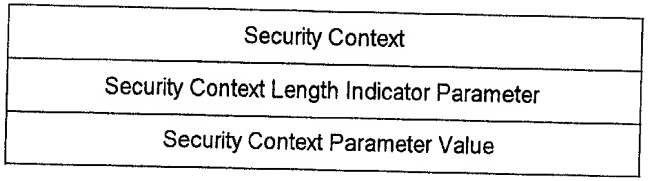


Figure 11

Security Context Values

Value	Meaning
0	Not used.
1	Data Encryption Algorithm
2	Integrity Check
3	Message Code Authentication
4	Sequence, Timestamp and Identification

Figure 12

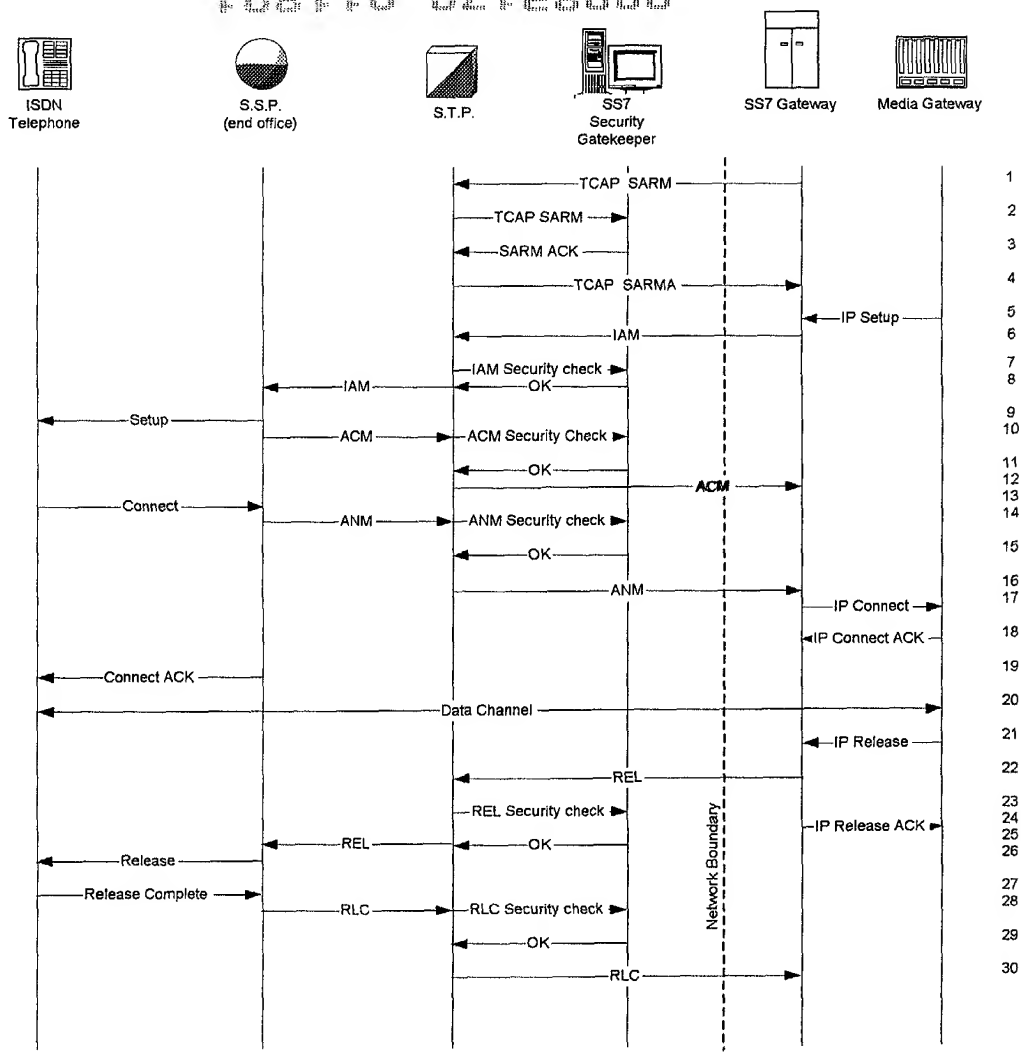

ISDN Telephone
S.S.P. (end office)
S.T.P.
SS7 Security Gatekeeper
SS7 Gateway
Media Gateway
TCAP SARM
TCAP SARM
SARM ACK
TCAP SARMA
IP Setup
IAM
IAM Security check
IAM
OK
Setup
ACM
ACM Security Check
OK
ACM
Connect
ANM
ANM Security check
OK
ANM
IP Connect
IP Connect ACK
Connect ACK
Data Channel
IP Release
REL
REL Security check
IP Release ACK
REL
OK
Release
Release Complete
RLC
RLC Security check
OK
RLC
Network Boundary
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30

Figure 13

TOSTA 6CT28660

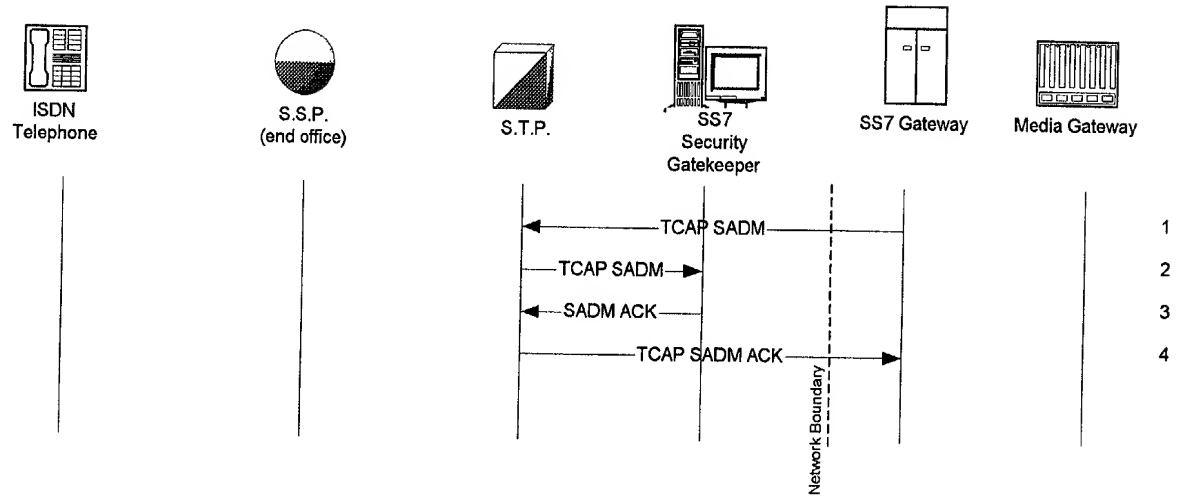


Figure 14

TO8TO 6ZT28660

Initial Address Message

SIO and Routing Label	
CIC Low-Order Octet	
2-bits spare	CIC High-Order 6-bits
Message Type = 1	
Nature of Connection Indicators	
Forward Call Indicator Bits H..A	
Forward Call Indicator Bits P..I	
Calling Party Category	
Offset of 1st Mandatory Var. Parameter	
Offset of 2nd Mandatory Var. Parameter	
Offset of Start of Operational Part	
Length Indicator of User Service Info	
User Service Information No. of Octets = Length Indicator Value	
Length Indicator of Called Party No.	
Called Party Number No. of Octets = Length Indicator Value	
Optional Parameter Code	
Optional Parameter Length Indicator	
Optional Parameter No. of Octets = Length Indicator Value	
End of Optional Parameters Indicator	

Fig. 15

Address Complete Message

SIO and Routing Label	
CIC Low-Order Octet	
2-bits spare	CIC High-Order 6-bits
Message Type = 6	
Backward Call Indicator Bits H..A	
Backward Call Indicator Bits P..I	
Offset to Start of Optional Part	
Optional Parameter Code	
Optional Parameter Length Indicator	
Optional Parameter No. of Octets = Length Indicator Value	
End of Optional Parameters Indicator	

Fig. 16

TOSTTO 6/T28660

Answer Message

SIO and Routing Label	
CIC Low-Order Octet	
2-bits spare	CIC High-Order 6-bits
Message Type = 9	
Offset to Start of Optional Part	
Optional Parameter Code	
Optional Parameter Length Indicator	
Optional Parameter No. of Octets = Length Indicator Value	
End of Optional Parameters Indicator	

Fig. 17

Release Message

SIO and Routing Label	
CIC Low-Order Octet	
2-bits spare	CIC High-Order 6-bits
Message Type = 12	
Offset of 1st Mandatory Var. Parameter	
Offset of Start of Operational Part	
Length Indicator of Cause Indicators	
Release Cause Indicator Parameter No. of Octets = Length Indicator Value	
Optional Parameter Code	
Optional Parameter Length Indicator	
Optional Parameter No. of Octets = Length Indicator Value	
End of Optional Parameters Indicator	

Fig 18

Release Complete Message

SIO and Routing Label	
CIC Low-Order Octet	
2-bits spare	CIC High-Order 6-bits
Message Type = 16	

Fig. 19

TOSTTO 67F38660

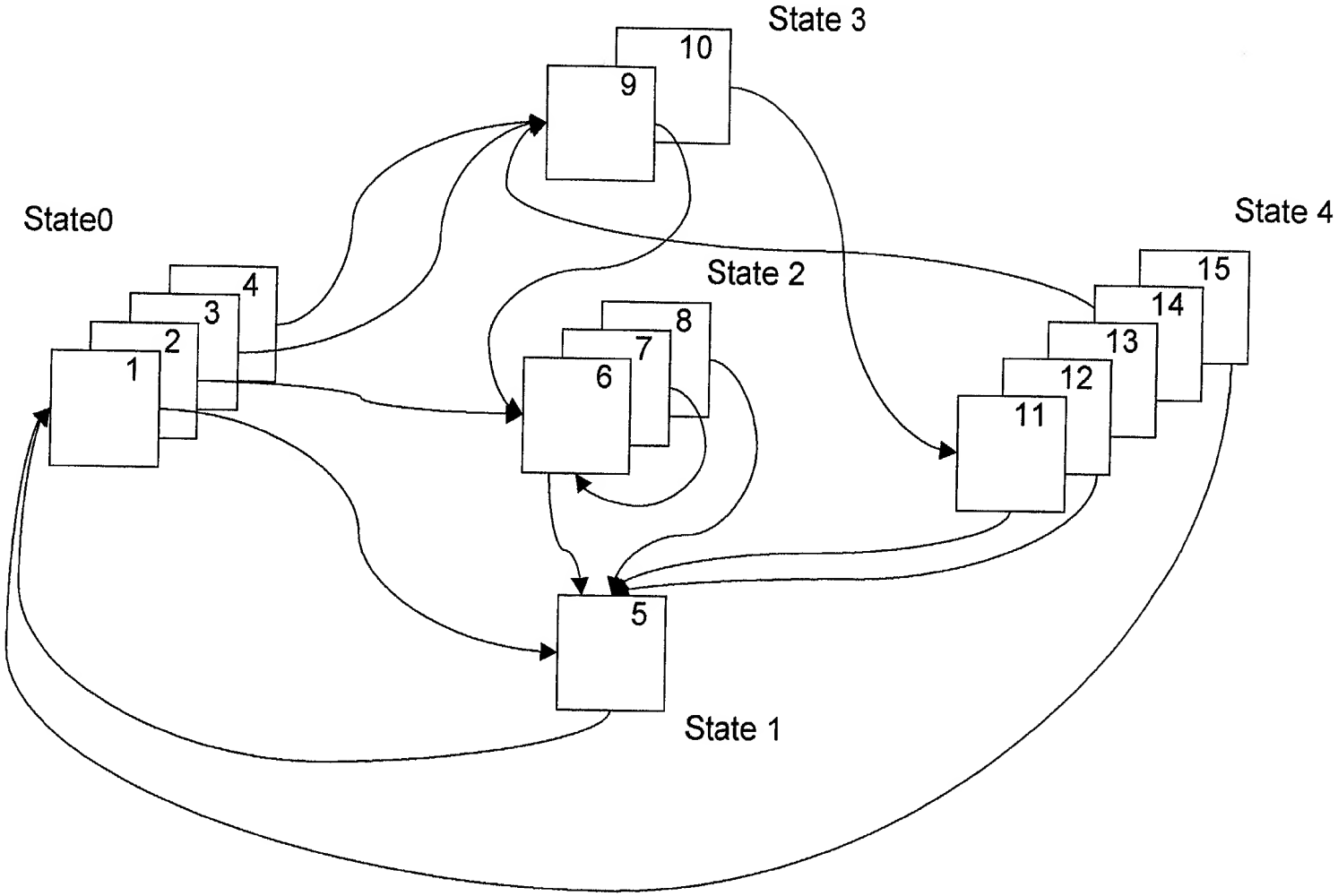


Fig. 20